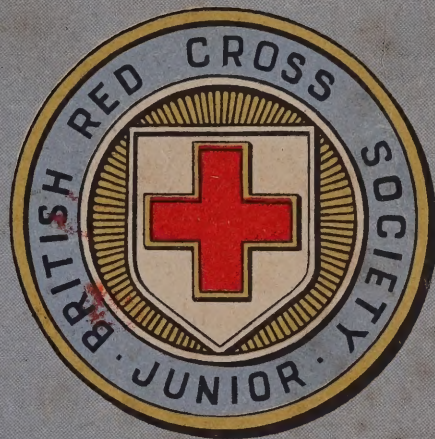




BRITISH RED CROSS SOCIETY

JUNIOR **FIRST AID** MANUAL

(1st EDITION)

PRICE 2/6



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FOREWORD

This manual is intended for the use of young people : it contains all that is needed for Parts 1 and 2 of the British Red Cross Society's Junior First Aid Course and Examination. It may be regarded as an introduction to the more advanced First Aid Manual No. 1, to which lecturers and instructors of this course are referred. The subject matter is based on a script prepared by Doctor Gladys H. Bliss.

It has been edited by the Medical Adviser with the following objects in view. First, that visual methods of presentation should be employed as far as practicable, to facilitate learning and to avoid lengthy descriptions. Secondly, that technical and medical terms should be reduced to the minimum, the main thing being to convey the salient points in First Aid with simple analogies where applicable.

Unfortunately, accidents occur only too often in the home, at sports, on the highways, and on beaches, both during work-times and holidays.

A knowledge of what to do, properly applied, may save life or the loss of a limb, and is therefore of value to the individual, the community and the country.

If you make yourself proficient in First Aid, you will add much to your usefulness, especially as those things learnt while you are young are likely to be remembered throughout life.

H. E. Whittingham

Medical Adviser,
British Red Cross Society.

Chapter I



SYMPTOMS

are what patient
feels and can
tell.

SIGNS

can be seen

What is First Aid?

First Aid is the help and assistance given to injured people or those taken suddenly ill, before the arrival of the doctor.

The trained First Aider can do this by following simple rules used by doctors and in hospital, but it is most important to remember that the First Aider cannot replace the doctor or nurse.

While waiting for skilled assistance after an accident, the First Aider should do what is essential to save life, to prevent further injury, and to aid recovery.

A **GOOD** FIRST AIDER SHOULD BE :

Observant,—should notice all signs.

Resourceful,—should make the best use of things at hand.

Gentle,—should not cause pain.

Tactful,—should not alarm the patient.

Sympathetic,—should be comforting.

Cheerful,—a happy expression inspires confidence.

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General Principles

A First Aider must not apply treatment he has not been taught.

In major (or severe) accidents send for a doctor, giving a clear report of what has occurred.

In minor (or small) accidents send the patient to a doctor after First Aid has been applied.

When you have studied this book you will know the difference between major and minor accidents.

Don't fuss. Always keep cool, and use encouraging words to the patient.



1 Stop bleeding (hæmorrhage) see page 26

2 Make sure patient is breathing properly
— remove any obstruction.
— see there is plenty of fresh air.
— keep crowds well back.

3

GIVE REST

Keep patient in most comfortable position.

Do not move patient until you know what is wrong.

Don't lift patient's head, if face is pale.

4

GIVE WARMTH

Cover with rugs or coats and apply covered hot water bottle.

This is treatment for shock
see page 49.



5

At suitable moment, remove cause of accident.

6

Give any special treatment required.

DO NOT GIVE STIMULANTS

— if patient is bleeding.

— if patient is unconscious.

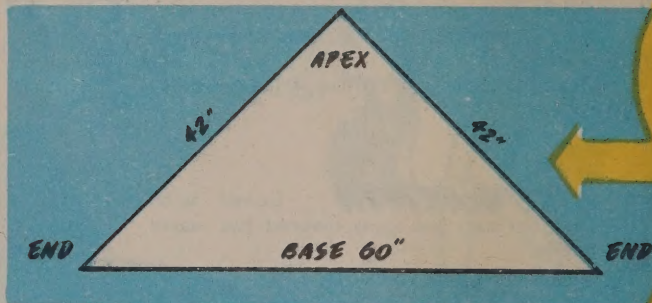
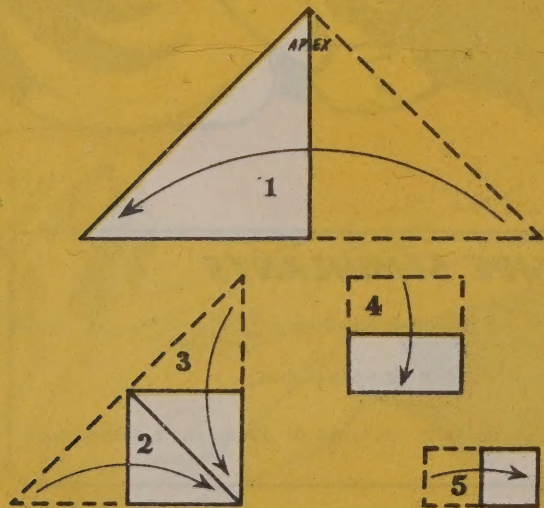
— if injury to lungs or abdomen is suspected.

Chapter 2

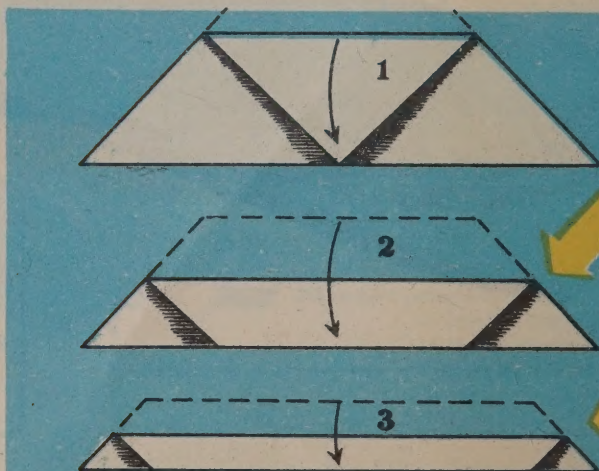
The Triangular Bandage

- The Triangular Bandage is the most useful bandage for first aid because it is easily made or improvised. It is usually made from bleached calico but any plain material is suitable.
- The edges of practice bandages may be overcast, but bulky seams must be avoided.
- When not in use, bandages should be washed and ironed, and then stored folded.

Folding as a **PAD**, or for **STORAGE**.



Folding for **APPLICATION**.



Open Bandage

for

- Large arm sling
 - Keeping dressings in place on
 - Fanning patient
- { scalp, chest, abdomen, hand, foot, elbow, knee, shoulder, hip

Broadfold Bandage

for

- Small arm sling.
- Immobilising certain fractures where splints cannot be used.
- Tying lower limbs together when one is fractured.

Narrow-Fold Bandage

for

- Keeping splints in position.
- Keeping certain dressings in place.
- Applying pressure to stop bleeding.
- Padding splints.

A Bandage should always be tied in a

7

Reef Knot



which

- Does not slip.
- Is flat and neat.
- Is easy to untie.

REMEMBER

when tying put

- Left over right.
- Right over left.



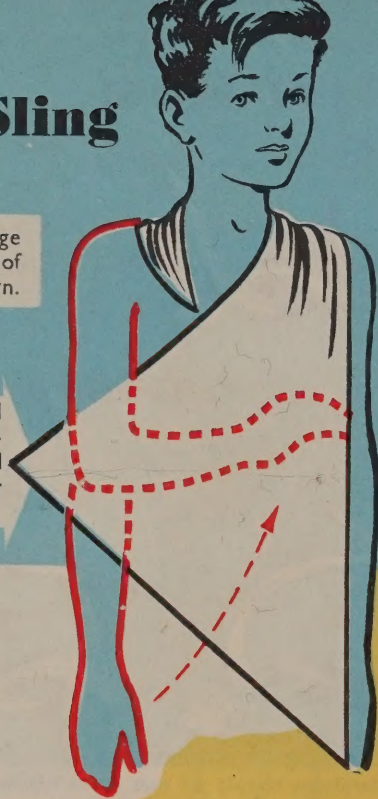
All bandages should be neat when finished, and the ends tucked in.

- A LOOSE bandage is useless.
- A bandage TOO TIGHT may stop circulation and cause injury.

8 Large Arm Sling

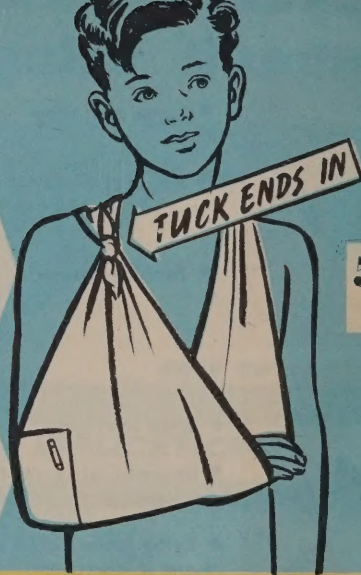
1. Place bandage over front of body as shown.

2. Move injured arm on to bandage with hand slightly higher than elbow.



3. Tie reef knot in front of shoulder of injured side.

4. Turn over corner at elbow, and pin.



5. Fold in edges if too large.

**IMPROVISED
SLINGS**
can be made by



Placing the injured arm inside buttoned-up coat or waistcoat.



Pinning the sleeve-cuff to the lapel of coat on opposite side.



Small Arm Sling

Use broadfold bandage.
Apply to support the hand, wrist,
and part of forearm.

Tie reef knot on injured side
below collar bone.



Turning up the bottom edge of the
coat, and pinning it to opposite lapel.



Using belts, braces, neck-ties, or
tapes.



Open bandage used as a
FAN.

Scalp Bandage

10



1 Turn one border in two inches. Place this over forehead just above eyebrows.

2 Cross ends over apex behind head and carry forward to forehead.

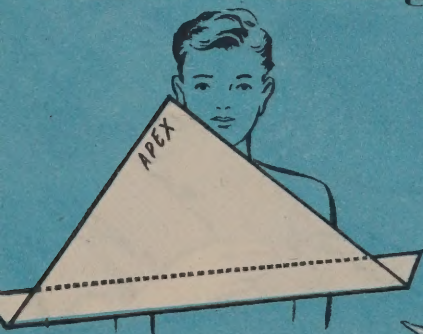


3 Tie knot in centre of forehead.



4 Pull apex down, then turn up and pin.

Chest Bandage (FRONT)



1 Turn up lower border three inches. Place apex over shoulder.

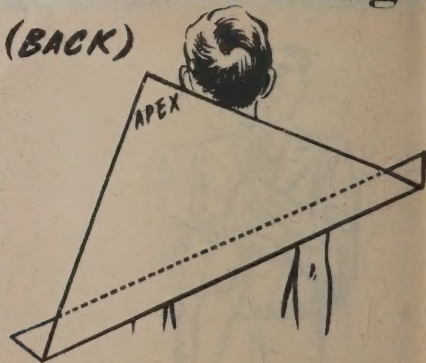


2 Tie lower ends in reef knot directly below apex.



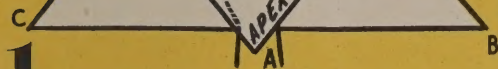
3 Tie longer end of this knot to apex.

Chest Bandage (BACK)

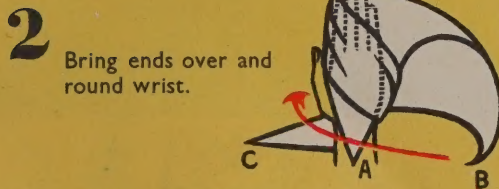


Apply bandage to back and proceed as before.

Hand Bandage



- 1 Place hand palm downwards on fully open bandage. Fold apex over hand.



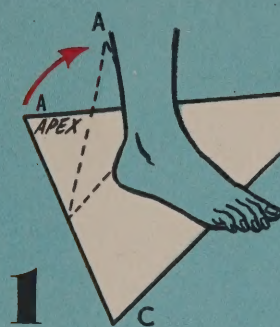
- 2 Bring ends over and round wrist.



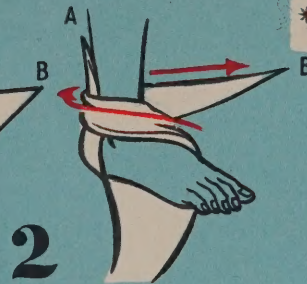
- 3 Tie at back of wrist. Bring apex over knot, and pin.

Heel or Elbow Bandage

11

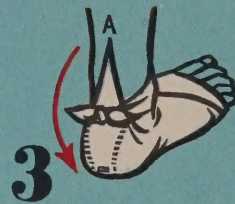


- 1 Bring apex upwards behind joint.



- 2 Cross ends over front of joint and then carry behind. Pass ends once round the limb, and tie at the back.

* For elbow only, fold up three inches along base.



- 3 Pull apex upwards, turn down over knot, and pin.

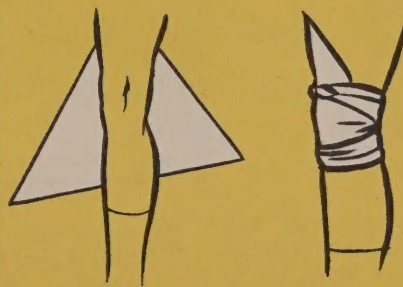
Foot Bandage



- Similar to hand bandage — knot and apex being at front of ankle.

Knee Bandage

Similar to elbow bandage except that joint is not bent.



Shoulder Bandage

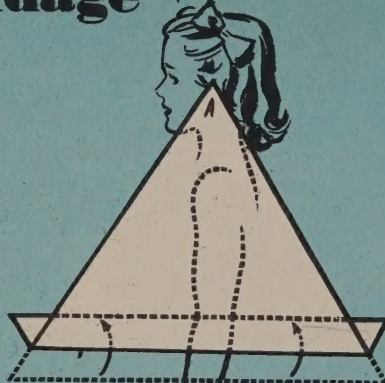
(2 BANDAGES REQUIRED)

12

BANDAGE
CENTRE ON
SHOULDER



1. Apply open bandage with its centre over injured shoulder.



2. Fold base of bandage in 3 inches.



3. Pass ends round and round middle of upper arm and tie off (one inch above lower edge).



5. Turn apex down, and pin.

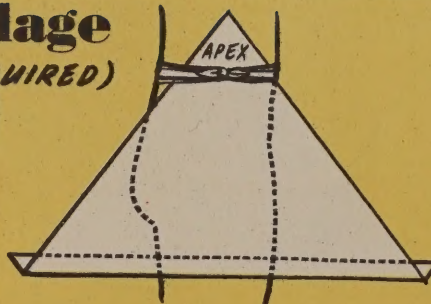
1 INCH

Hip Bandage

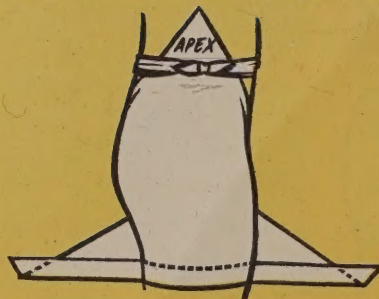
(2 BANDAGES REQUIRED)

1.

1. Pass a narrowfold bandage round the body just above hip bones, and tie over hip of injured side.



2. Apply open bandage to injured hip, passing apex under the first bandage. Turn lower border in 3 inches.



3. Pass ends round thigh.



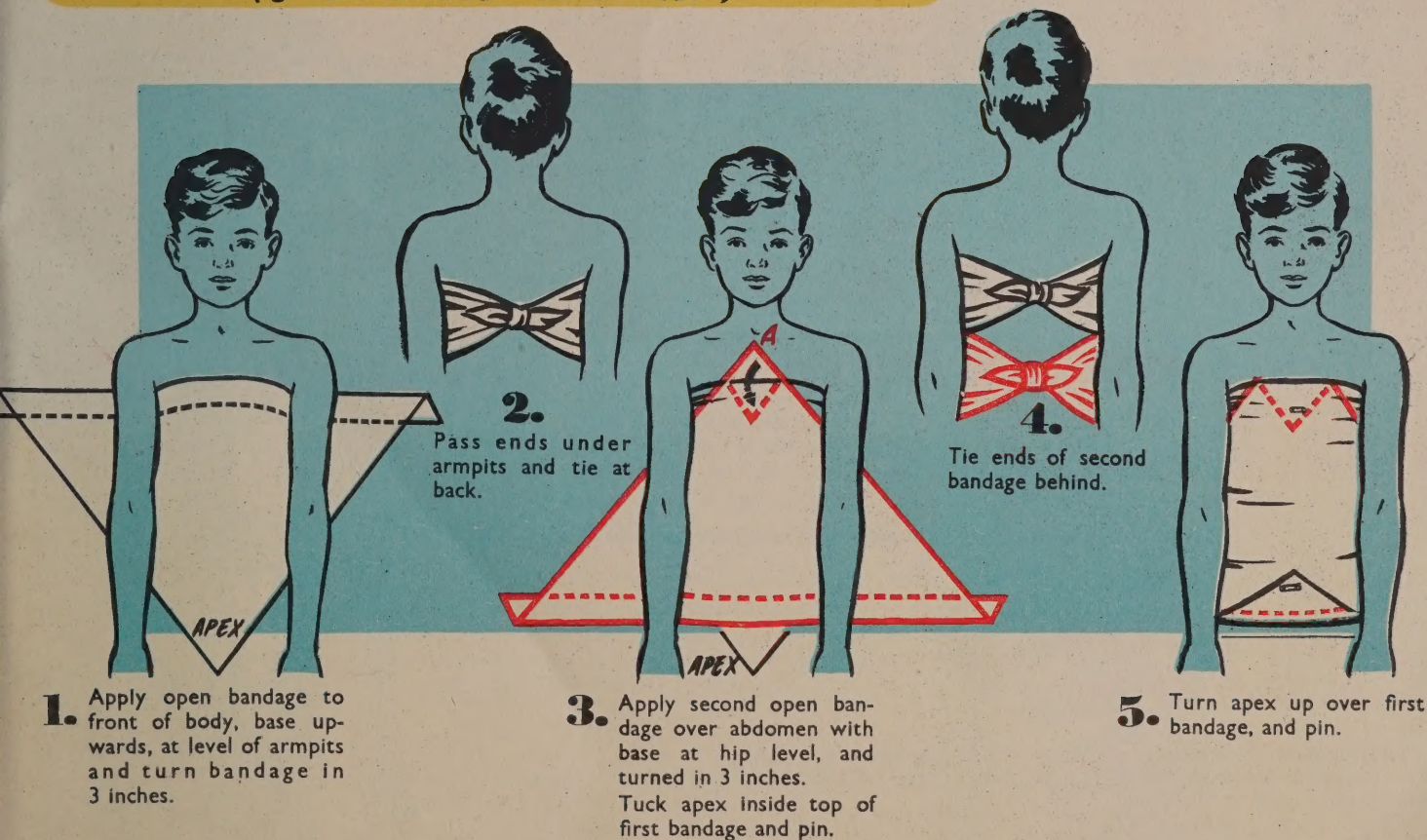
5. Pull apex down firmly, and pin.

4. Tie ends one inch above lower border.

For back of hip —
place open bandage further back
For groin —
place open bandage further forward

Chest and Abdomen Bandage

(2 BANDAGES REQUIRED)



Chapter 3

Systems of the Body

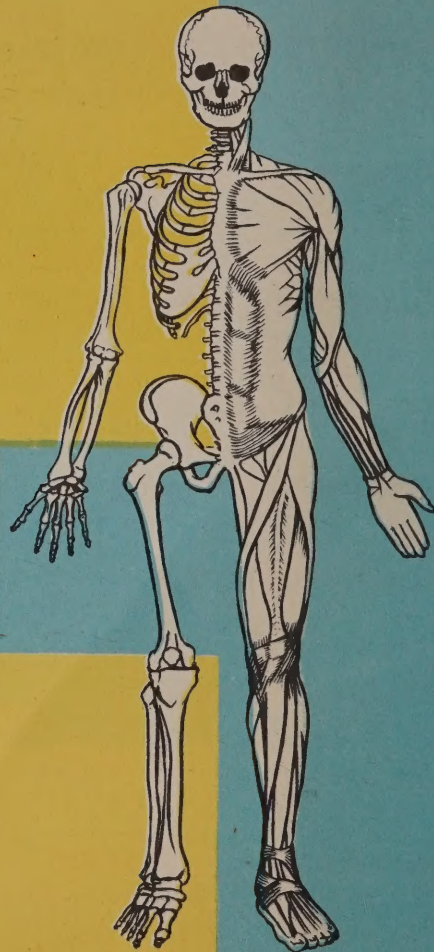
The body is made up of millions of cells which are so small that they can only be seen through a microscope. A healthy body depends on all these cells working together as a team.

MUSCULAR SYSTEM

Muscles attached to bones can contract and expand like elastic to change or produce movement. Muscles are the flesh which gives shape to the body, and are covered with a layer of fat, and then the outer skin.

BONE SYSTEM or SKELETON

The body framework consists of more than 200 bones, held together by strong bands or fibres called 'ligaments.'



NERVOUS SYSTEM

This consists of the brain, the spinal cord, and a network of nerves which carry messages to and from different parts of the body. It controls all other systems.

RESPIRATORY SYSTEM

This keeps the lungs supplied with air. The blood receives oxygen from the air, and gives up waste material (carbon dioxide), which is breathed out.

CIRCULATORY SYSTEM

This is a series of tubes (arteries, veins, and capillaries) through which blood is kept constantly moving by the pumping of the heart. The blood distributes nourishment from the digestive system, and oxygen from the lungs, and carries waste matter away to the kidneys, skin, and lungs for disposal.

DIGESTIVE SYSTEM

Converts food eaten, into products for nourishment.

EXCRETORY SYSTEM

Gets rid of waste products through kidneys (urine), skin (perspiration), large bowel (solid waste), and lungs (carbon dioxide).

GLANDULAR SYSTEM

There are about a dozen small organs in the body, known as 'glands,' that form certain chemical substances (secretions) which pass into the blood stream to help govern the various workings of the body. The working of these glands affects the appearance and character of people.

REPRODUCTIVE SYSTEM

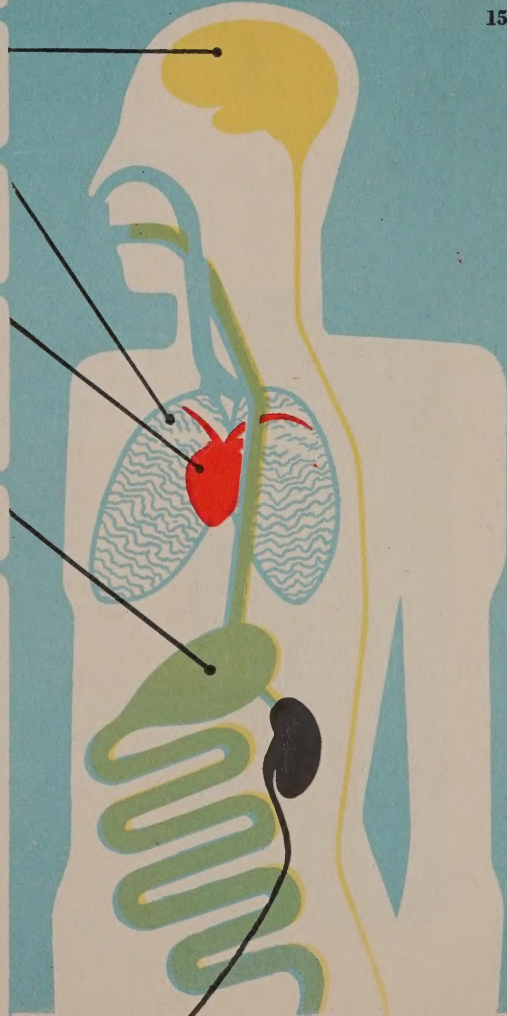
This is distinct in the two sexes and is concerned with the production of children.

BRAIN

LUNG

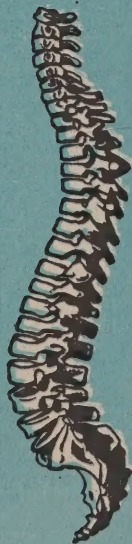
HEART

STOMACH



Chapter 4

The Structure of the Body

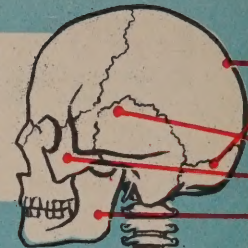


I THE SKELETON There are over 200 bones, varying in size according to the work they have to do.

BACKBONE Consists of 33 small bones (vertebrae), one on top of the other, and capable of slight movement. Encloses and protects the spinal cord.

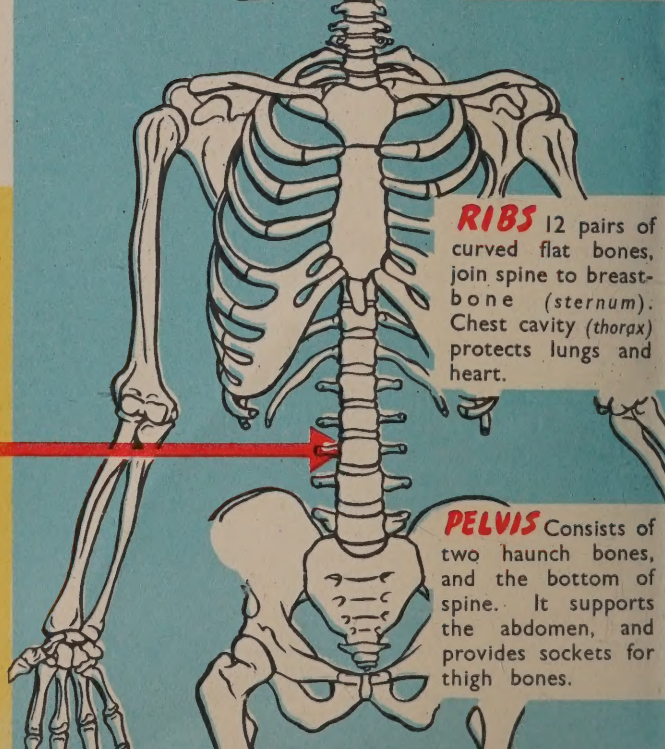
HEAD Several bones fixed together form the SKULL which protects the brain.

VAULT
BASE
TEMPLE
CHEEK BONE
LOWER JAW

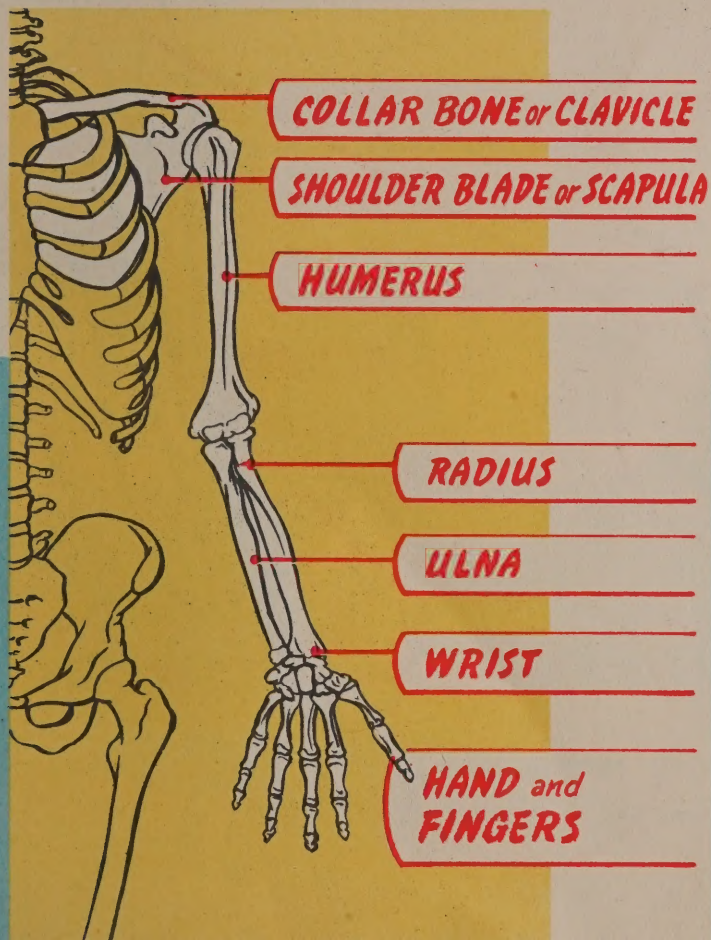


RIBS 12 pairs of curved flat bones, join spine to breast-bone (sternum). Chest cavity (thorax) protects lungs and heart.

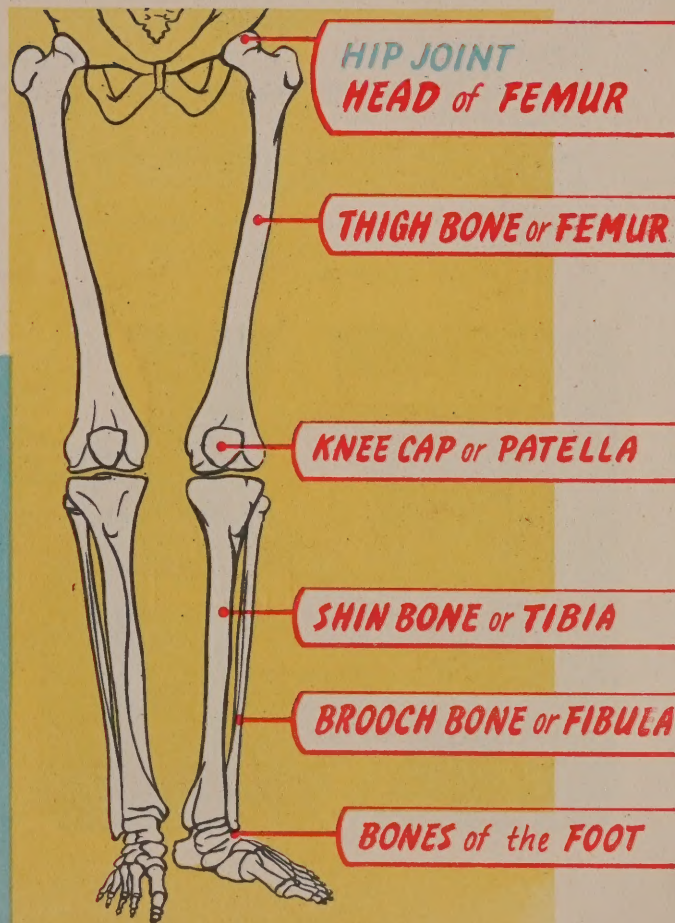
PELVIS Consists of two haunch bones, and the bottom of spine. It supports the abdomen, and provides sockets for thigh bones.



Upper Limbs



Lower Limbs



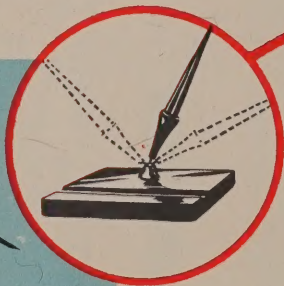
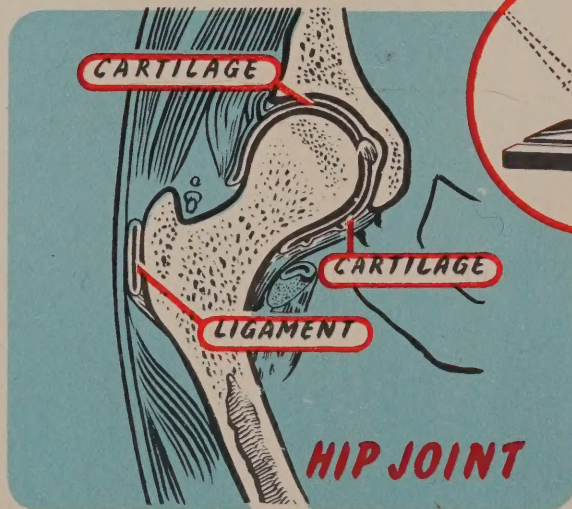
Joints

Are formed where two or more bones meet, or "articulate."

Are held together by elastic-like cuffs or **LIGAMENTS**.

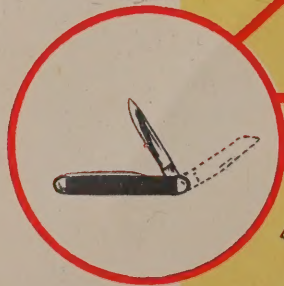
The ends of the bones are covered with gristle (or **CARTILAGE**), to permit them to move.

The cartilage is covered by a thin membrane which produces a fluid to oil the joints and ensure smooth movement.



SHOULDER

ELBOW

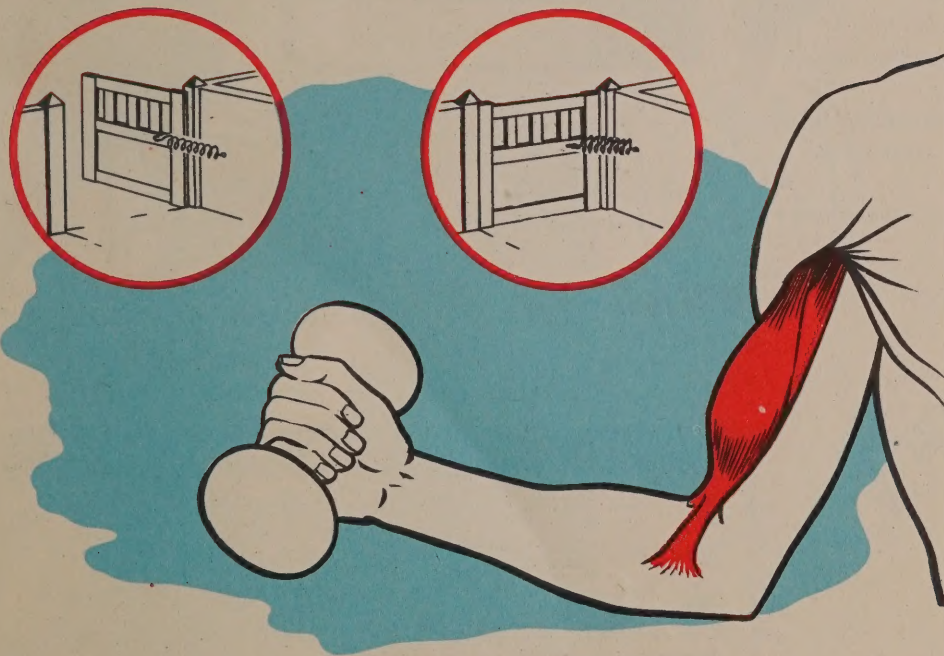


WRIST

Muscles

Are the fleshy part of the body and are attached to the bones by strong tissue resembling cord.

They are able to contract and expand, and so move the bones.



Chapter 5 Injuries to Muscles and Joints

The two injuries that can happen to **MUSCLES** are

STRAINS and **RUPTURES**

A Strain is due to over-stretching a muscle as when lifting heavy weights or straining at sport.



SIGN

—Swelling at point of injury.

SYMPTOM

—Pain on moving injured part.



WHAT TO DO

Support injured part as comfortably as possible. Apply a cold compress. *

Get medical aid.

* TO MAKE A COLD COMPRESS

1. Take a piece of lint, flannel, linen, or large handkerchief.
2. Fold to size required.
3. Soak in cold water and wring out until it stops dripping.

The compress should be applied to injured part and changed frequently to keep it cold and wet.

A Ruptured Muscle

is due to sudden and severe exertion which may tear some of the muscle fibres.



SIGN

—Swelling and discolouration (bruising).

SYMPTOM

—Sudden and sharp pain, increasing with movement, sometimes producing cramp.



WHAT TO DO

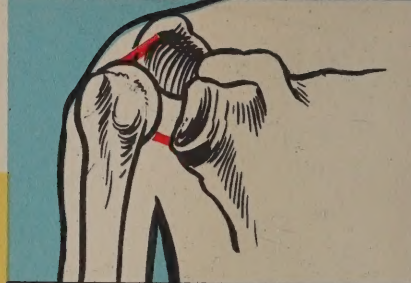
1. Support injured part as comfortably as possible.
2. Apply cold compress to lessen bleeding into muscle.
3. Get medical aid.
4. Later, when bleeding stops, if doctor orders, apply warmth :
 - hot water bottles.
 - hot flannels.
 - hot fomentations.

Injuries that can happen to joints are

STRAINS AND DISLOCATIONS

A Strain is due to a twist of the joint which tears the ligaments, but does not displace the bones.

ANKLE



SHOULDER STRAINED

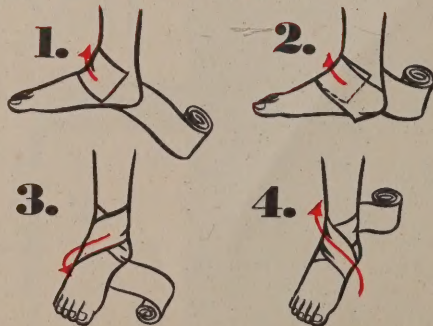
SIGNS

Swelling and discolouration round joint.

SYMPTOMS

Pain at point of injury.
More pain on trying to move limb.

WHAT TO DO



Apply figure-of-eight narrow-fold bandage.

- 5.** Wet the bandage with cold water or evaporating lotion.
- 6.** Help patient home or to doctor.

A Dislocation

Is caused by a twist or severe wrench which displaces the bones and also tears the ligaments.



SIGNS

Deformity—that is, it doesn't look right.
Swelling and discolouration, that is, bruising.
Inability to move joint.

SYMPTOMS

Pain at injured part.
Numbness due to stretching of nerves.

WHAT TO DO

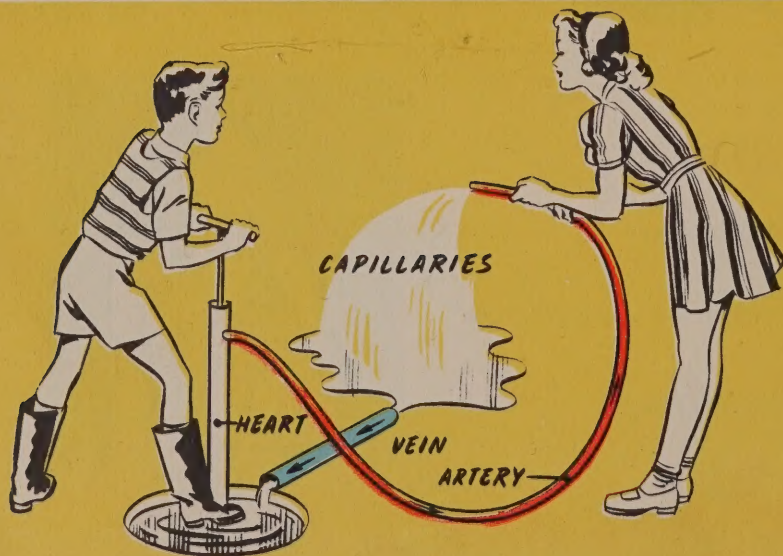
1. Prevent further injury.
2. Support part in the most comfortable position.
3. Get medical aid quickly.



***DO NOT ATTEMPT TO PUT BONE BACK IN POSITION**

Chapter 6 The Circulatory System

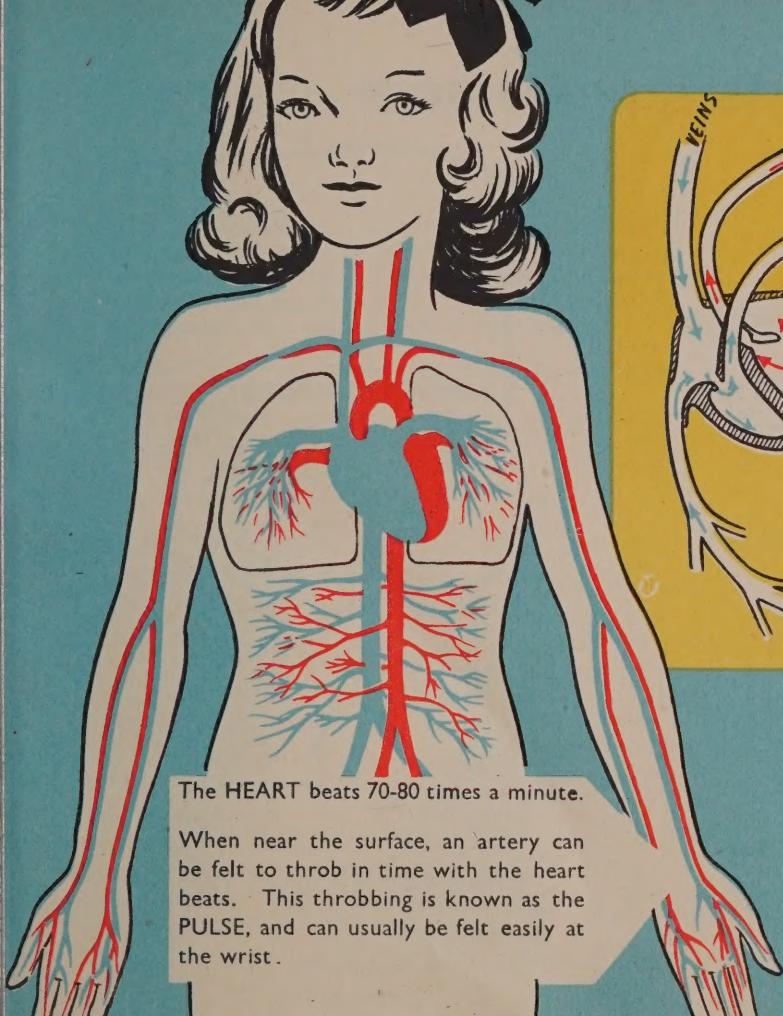
The **BLOOD** is a most important fluid which is distributed throughout the body by the **HEART** and the **BLOOD VESSELS** — this is known as the **CIRCULATORY SYSTEM**. It carries nourishment from digested food to the tissues, takes oxygen from the lungs to supply the tissues, and removes carbon dioxide and other waste matter from the tissues.



Arteries take blood from the heart to the tissues. Blood in the arteries is **BRIGHT RED** because it contains plenty of oxygen.

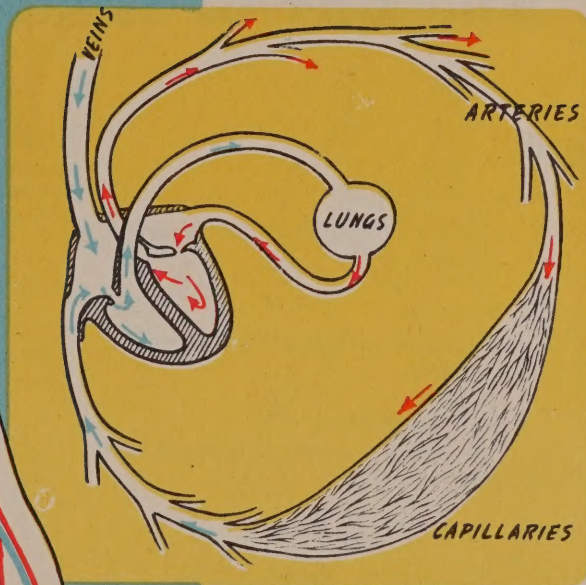
Arteries divide into a network of very fine tubes, called **Capillaries** : these are thinner than a hair.

The capillaries join up again into **Veins** (often close beside the arteries) which take the blood back to the heart. The blood is now **DARK RED** because it has parted with most of its oxygen. From the heart it is pumped through the lungs for purification, that is, disposal of carbon dioxide and taking up of oxygen.



The HEART beats 70-80 times a minute.

When near the surface, an artery can be felt to throb in time with the heart beats. This throbbing is known as the PULSE, and can usually be felt easily at the wrist.



Briefly, the blood circulates thus :

Heart, arteries, capillaries, veins, heart, lungs, heart, arteries, etc.

An adult has 10 to 12 pints of blood in his body (about a pint for each stone in weight) but the loss of two pints or more is a serious matter. It is important therefore to

STOP ALL BLEEDING AS SOON AS POSSIBLE

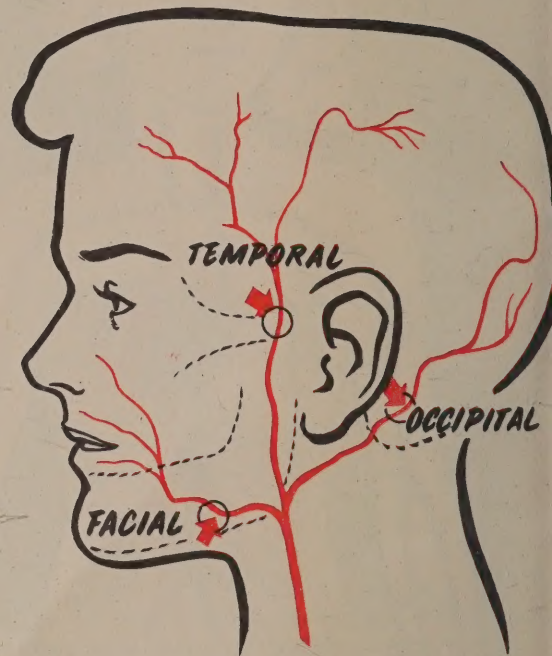
Chapter 7. Bleeding or Haemorrhage

There are three types of bleeding :—

ARTERIAL	—	from an artery.
	—	The blood is bright red, and comes out in spurts.
VENOUS	—	from a vein.
	—	The blood is dark red, and flows out smoothly.
CAPILLARY	—	from capillaries.
	—	The blood is usually bright red, and oozes.

Severe bleeding can be stopped in two ways :—

1. If there is no "foreign body" in the wound—apply pressure to the wound itself using a finger covered by a clean dressing (digital pressure) or by a clean pad and bandage.
2. If this cannot be done—apply pressure to the proper arterial pressure point and so prevent blood flowing to the wound.
This can be done using a finger (digital pressure) or by pad and bandage (tourniquet).

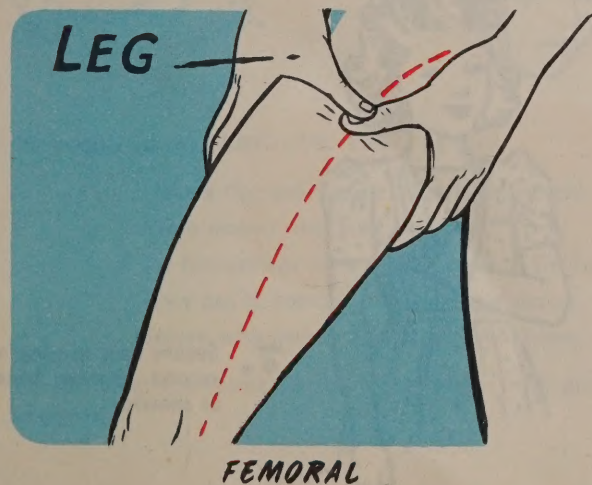


PRESSURE POINTS OF THE HEAD.

Pressure Points

are places where an artery passes near a bone and can be pressed hard enough against it to stop the blood flowing. This method should only be used when the bleeding cannot be stopped at the wound itself (for instance, because of a "foreign body," such as glass, being in the wound).

In all cases of severe bleeding, treat patient for shock, see page 49



METHOD FOR PRACTICE

Hold patient's wrist and find pulse.

With other hand grip the upper arm between thumb and fingers as shown.

Press thumb and fingers towards each other.

If properly done, the pulse at wrist will disappear, showing that flow of blood has been stopped in that arm.

Cut in Palm of Hand *(NO FOREIGN BODY IN WOUND)*



- 1.** Raise hand and try to stop bleeding with pressure of thumb.



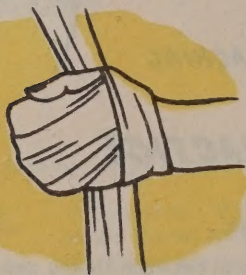
- 2.** Place pad of clean lint or linen over the wound and close fingers tightly over it.



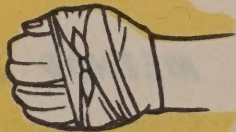
- 3.** Apply narrow-fold bandage.



- 4.** Cross ends over base of thumb and pull tight.



- 5.** Pass ends round base of little finger and pull tight.

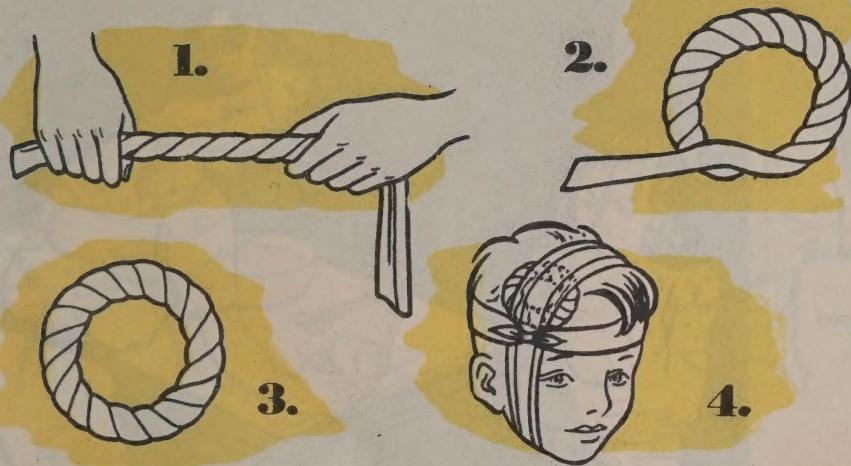


- 6.** Pass ends round clenched fist and tie.



- 7.** Secure arm in sling with second narrow bandage as shown.

Scalp Wound



For a scalp wound a RING PAD should be used.

Make a ring pad slightly larger than wound.

Clean wound with mild antiseptic.*

Do not cut hair—if in doubt, leave to Doctor or Nurse.

Place pad in position over a clean dressing.

Secure with narrow-fold bandage as shown.

* An antiseptic is a chemical agent which hinders the growth and activity of germs.

Nose Bleeding

IN YOUNG PERSON

Seat in front of open window.

Place head back, raise hands.

Undo tight clothing at neck and waist.

Apply cold compress to bridge of nose.

Tell patient to breathe through mouth but not to blow nose.



IN ELDERLY PERSON

If severe, send for doctor.

Whilst waiting, treat as for young person.

Chapter 8

Wounds

A wound is a break in the skin and tissues, which allows blood to escape and germs to enter.

GERMS are—too small to be seen by the naked eye.

—found everywhere, especially in dust and dirt.

If they enter a wound, they grow and produce poison, making the wound "septic."

If these poisons pass into the blood stream they cause "blood poisoning and fever."

WE MUST THEREFORE

- Keep germs away by having everything perfectly clean.
- If wound is dirty, apply antiseptic solution, but only under Doctor's or Nurse's Instructions



WHAT TO DO



- 1 Seat patient.
- 2 Wash your hands.
- 3 Collect all dressings needed and place on a clean towel or handkerchief.
- 4 Remove clothing from injured part only, if necessary.



5 Apply a dressing as follows:—

Clean around and away from the wound with soap and water.

Do not disturb any blood clots—this may restart bleeding.

Open packet of dressings, only touching the edges.

With clean scissors cut dressings twice the size to cover the wound, and fold in two.

Hold by corner and place gently on wound.

Cover with cotton wool, and bandage.



6 Rest the injured part.

7 Treat for shock (if any).

GRAZES

Wash gently to remove surface dirt but do not probe.

Cover with clean dry dressing, cotton wool, and bandage, as above.

CUTS

(If fracture suspected, treat as such. The limb will usually be limp if broken.)

If bone not broken, raise limb.

For small cut with no foreign body

Apply pressure to the wound, and keep it well covered while washing around it with soap and water.

Apply clean dressing and bandage as above.

For large cut, or small cut with foreign body

Apply pressure at nearest pressure point.

Do not attempt to remove foreign body from wound.

Cover with clean dressing and lightly bandage.

Get a Doctor.

A Bruise (or Contusion)

is capillary bleeding under the skin, caused by a knock or blow which does not break the skin.



WHAT TO DO

1. Bathe the part in cold water.
2. Apply a cold compress (see page 20).



Splinters

If the splinter is sticking out it can be removed with tweezers, otherwise it should be left to a doctor or nurse.

It is so easy to push the splinter further in and make it more difficult to remove.

WHAT TO DO

1. Remove sting (if present) with tweezers.
2. Apply a compress soaked in solution of two teaspoonsful of baking powder to 1 pint of water.
Or apply a wet blue-bag, for all stings except wasps (use Vinegar for Wasp).
3. Treat for shock (if any) see page 49.



To Prick a Blister

1. Pass a clean needle through the flame of a match—do not wipe off the soot or touch afterwards.
2. Wipe blister with cotton wool and methylated spirit.
3. Pass needle through blister at skin level at two points, as shown.
4. Press fluid out with clean dressing.
5. Secure a small dressing over the blister until it heals.

NEVER remove the blistered skin.



NEVER puncture a burn or corrosive blister.

Chapter 9. Burns and Scalds

BURNS are caused by dry heat—fire, electricity, corrosives—strong acids or alkalis.

SCALDS are caused by moist heat—steam, boiling water, or hot fat.

WHAT TO DO

1. Rest and treat for shock (see page 49).
Do not remove clothing—unless wet with acid, alkali or petrol—as clothing helps to keep out air and keeps patient warm.
2. Keep all air away by applying strips of clean dressing soaked in :
 - (a) Luke-warm solution of baking soda (2 teaspoonsful to 1 pint of water).
 - (b) Luke-warm liquid tea.
 - (c) Luke-warm salt solution. (1 teaspoonful to 1 pint of water).
3. Keep dressing moist.
4. Get a doctor.
5. Give patient plenty of warm drinks (if conscious).

CLOTHES CATCHING FIRE

1. Wrap rug, coat or table cloth *tightly* round victim, who should remain still, with burning side uppermost. Movements only fan the flame.
2. Treat for shock and burns, as above.



DO NOT USE fats, oils, or greasy ointments.

DO NOT PRICK burn blisters.

Face Burns

WHAT TO DO

1. Cut a mask out of lint, or handkerchief or triangular bandage, with slits for eyes and mouth.
2. Sew tapes to corners.
3. Smear fresh vaseline on eyebrows, eyelashes, nostrils, and lips.
4. Soak mask in a solution of baking soda or salt solution, and tie on face.



Scalded Throat

(due to drinking too hot fluid).

WHAT TO DO

1. Send for a doctor at once.
2. Put victim in warm room.
3. Give sips of very weak solution of baking soda (2 teaspoonsful to 1 pint of warm water).

Severe Burns

cause extensive shock which may be more dangerous to life than the burns.

Get a doctor at once, and treat for shock first, then burns afterwards.

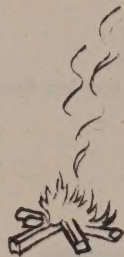
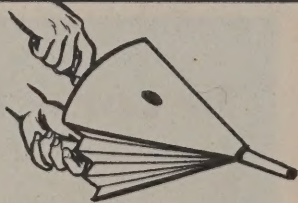
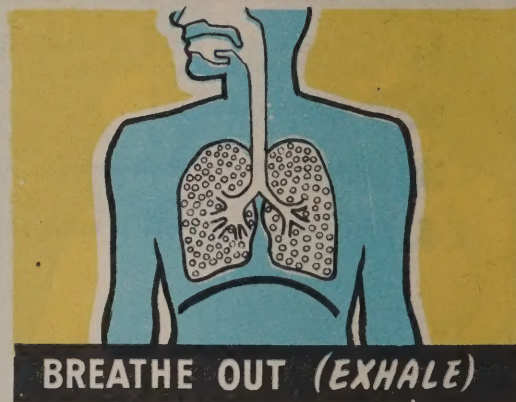
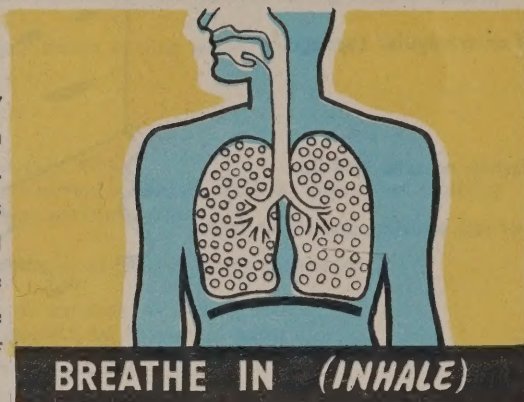
Electrical burns may affect patient's breathing—give artificial respiration (see page 38) and treat for shock first.

Chapter 10 The Respiratory System

The function of the Respiratory System is the breathing in of fresh air and the breathing out of stale air. The air passes through the nostrils (and mouth), down the throat and windpipe to the LUNGS. These are two sponge-like bags, which lie inside the chest, one on each side of the heart.

As the lungs fill with air they expand.

Usually we breathe, in and out, 16 to 18 times every minute.



YOUR BODY, LIKE FIRE, NEEDS FRESH AIR TO KEEP ALIVE.

If a person cannot get air into the lungs he will be SUFFOCATED (or ASPHYXIATED) for want of oxygen.



This can happen by

CHOKING

or blocking of the windpipe. For example, particles of food go down 'the wrong way.'

WHAT TO DO

Give person a vigorous thump between the shoulder blades. If a small child—hold upside down to see if obstruction falls out, if not, hook it out with a finger.



SMOTHERING



SMOTHERING

—Supply of air cut off from nose and mouth.

1. CLOTHING OVER HEAD.

2. DROWNING
—water instead of air.

3. GASSING
—fumes instead of air.

Remove patient from cause or cause from patient, and apply artificial respiration (see next page).

ARTIFICIAL RESPIRATION (SCHAFFER'S METHOD)

is used to make a person breathe again after suffocation. It must be done correctly or it is a waste of time.

NOT A MOMENT MUST BE LOST!



1. Place patient face downwards, Arms outwards—Hands forward—Face to one side.
Make sure tongue is forward, and that mouth and nose are not obstructed.



2. Kneel to one side of patient's hips. Place hands flat on lower part of back just above hips, as shown.

3.

Keep arms straight, and swing forward slowly from the knees to give a firm steady pressure to force the air out of the lungs. Pause and count two.



4.

Swing backwards without lifting the hands. Pause and count three.



5.

Repeat these movements (3 and 4) 15 to 18 times a minute.



Continue until patient is breathing well, or doctor says you can stop. (Breathing may return even after an hour). Do not leave patient alone when breathing has started or it may stop again.

When patient starts to breathe, regulate your movements to his breathing.

A HELPER SHOULD

- Cover patient with rug or coat and place hot water bottle under the covering.

- Rub the limbs slowly on the insides from toes and fingers towards the heart.



Chapter II Fractures

A break of a bone is called a **FRACTURE**.

It can be caused by :

DIRECT VIOLENCE — break occurs where blow falls—
for example : car wheel running over leg.

INDIRECT VIOLENCE — break occurs some distance away
from impact—for example : collar
bone fracture due to fall on hand with
outstretched arm.

MUSCULAR ACTION — break caused by violent muscular
contraction—for example : the knee-
cap when avoiding a fall backwards.

A FRACTURE MAY BE



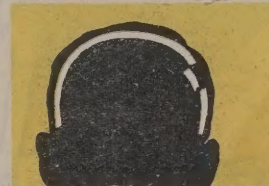
SIMPLE

little injury to surrounding tissues.



COMPOUND

open wound, bone may protrude and germs may enter.



COMPLICATED

internal organ may be injured.



GREENSTICK

partial break similar to that of a twig (only occurs in children).

SIGNS

Swelling and discolouration (bruising).
Limb is in unnatural position.

SYMPTOMS

Pain at injury.
Injured part cannot be moved.

WHAT TO DO

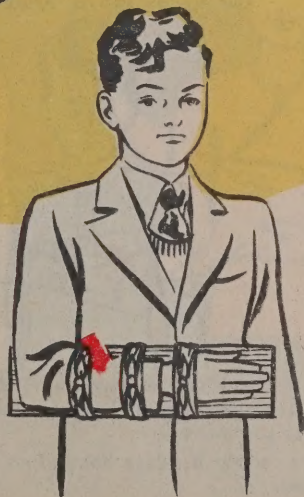
1. Put injured part at rest, and comfort patient.
2. Prevent further injury.
3. Apply splints to support the broken bone, or, for fractures where splints cannot be used, apply triangular bandages.
4. Get a doctor.

A bandage must not be tied over a fracture or over a bone that is immediately under the skin.

SPLINTS

Can be made from lengths of wood, tree branches, walking sticks, or thick paper folded several times.

They should always extend beyond the fracture and must be padded to prevent further injury.



TO TEST CIRCULATION IN ARM.

Press patient's finger nail—the nail turns white. When pressure is released, the nail should quickly become pink again, showing the blood has returned. Bandage is too tight if the nail remains white or blue, or if fingers are cold.

Fractures where Bandages are used

Jaw

SIGNS and SYMPTOMS

Pain on Movement.
Cannot speak clearly.
Teeth irregular.
Bleeding from gums.
Dribbling from mouth.

WHAT TO DO

1. Press lower jaw gently upward.
2. Apply centre of narrow-fold bandage under jaw and tie on top of head.
3. Apply second bandage in front of chin and tie at back of head.
4. Tie the ends together at each side.



Ribs

SYMPTOM

— pain when taking deep breath.

WHAT TO DO

1. Apply a broad-fold bandage round the chest just above the painful spot, knot on uninjured side. Do not tie knot over injury.
2. Apply a second bandage below first, overlapping as shown.
3. Place arm on injured side in a large arm sling.



Collar Bone (Clavicle)

WHAT TO DO

1. Prevent further movement which may make it worse and even become a compound fracture.
2. If bone is protruding DO NOT PUSH IT BACK—place a light, sterile dressing over it and bandage loosely.

3. Place a pad the size of a billiard ball in the armpit of injured side.
4. Bend elbow to right angle and gently draw shoulder back.
5. Support the arm with forearm across chest.
6. Place open bandage across chest as shown.



7. Pass the lower end over arm, and between arm and chest,



8. Tie on uninjured shoulder.
9. Turn up apex and pin.



SYMPTOMS

Pain in shoulder.

Arm helpless (patient usually supports limb with other hand)

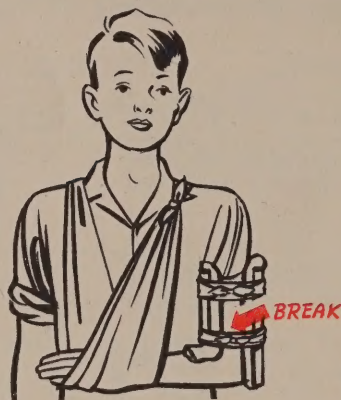
Some Fractures where Splints are used

Upper Arm (*HUMERUS*)

Usual fracture signs : (pain, discolouration, swelling, deformity).

WHAT TO DO

1. Gently bend forearm across chest and support in small arm sling.
2. Apply two short splints well padded as shown—the inner splint must not be long enough to press on the forearm or armpit.
3. Apply two narrow-fold bandages, one above and the other below the fracture.
4. Support arm in a sling—leave fingers showing to observe circulation.
5. Get a doctor.



Forearm (*RADIUS AND ULNA*)

Usual fracture signs (see above).

WHAT TO DO

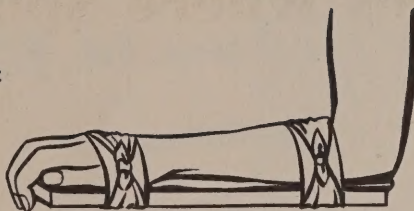
1. Gently bend forearm across chest.
2. Apply two well-padded splints, as shown, with fingers visible.
3. Secure them in position with two narrow-fold bandages (a third bandage can be used round the hand).
4. Place the arm in a large arm sling.
5. Get a doctor.

BUT NOTE CAREFULLY

- (a) If fracture is NEAR SHOULDER, splints cannot be used—apply broad-fold bandage as shown.
- (b) An injured ELBOW must not be moved—if bent, support with large arm sling.
If straight, tie forearm to hip.

Wrist

Usual fracture signs, and may be a lump just above the wrist.



WHAT TO DO

1. Apply one splint, as shown, and secure with two narrow-fold bandages.
2. Support in a large arm sling.
3. Get a doctor.

Lower Limbs

BACK, HIP, THIGH, KNEE-CAP, LOWER LEG, ANKLE AND FOOT

SIGNS and SYMPTOMS

pain at injury.

patient cannot get up.

lower limbs cannot be moved.

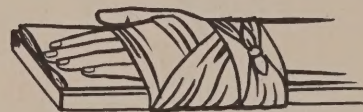
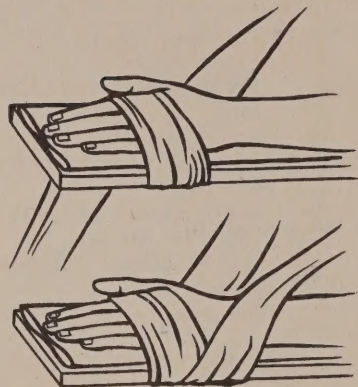
WHAT TO DO

1. Send for a doctor at once.
2. Do not move patient, but cover—give hot drinks if conscious.

REMEMBER

Severe injuries can easily be made worse by unskilled attempts.

Hand (INJURED OR CRUSHED)



1. Apply a well-padded splint as shown.
2. Secure it with a narrow-fold bandage in figure of eight as shown.
3. Get a doctor.

Chapter 12 Foreign Bodies in Eye, Nose, and Ear

Eye (FLY OR PIECE OF GRIT)



1. Prevent patient rubbing eye.
2. Blow nose to help tears to wash foreign body into lower eyelid.

3. Wash your hands.
Next turn down lower lid as shown.
4. If the particle can be seen on the lower lid, remove it with a moistened camel-hair brush or corner of soft handkerchief.

5. If particle is still under upper lid, pull upper lid over lower, as shown.
6. If the particle is stuck to the eyeball, do not attempt its removal.
7. Whether particle has been removed or not, put a drop of castor oil inside lower lid to soothe.
8. If pain continues, cover eye with pad and bandage lightly and take patient to doctor.

Ear

(Children sometimes push peas or beads into their ears, or insects may get in).

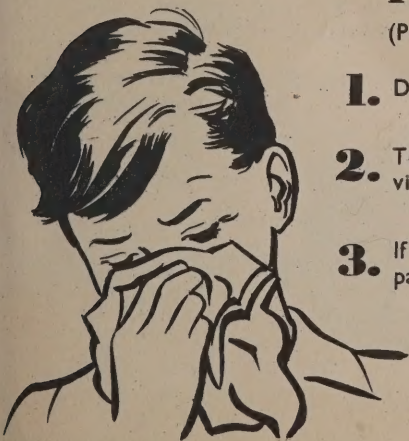
1. Do not try to poke the object out.
2. Turn patient's head on one side to see if object drops out.
3. If not, take patient to doctor at once.



Nose

(Peas or beads pushed up nose).

1. Do not try to poke object out.
2. Tell patient to blow nose violently.
3. If this does not dislodge it, take patient to doctor at once.



Poisonous Berries

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If a child has eaten poisonous berries by mistake :

1. Make him sick to get the poison out of his system as quickly as possible by :—
 - (a) Tickling back of throat with your finger.
 - (b) Giving an EMETIC—two tablespoonsful of salt in a glass of warm water every 5 minutes till vomiting occurs.
2. Fetch a doctor quickly.



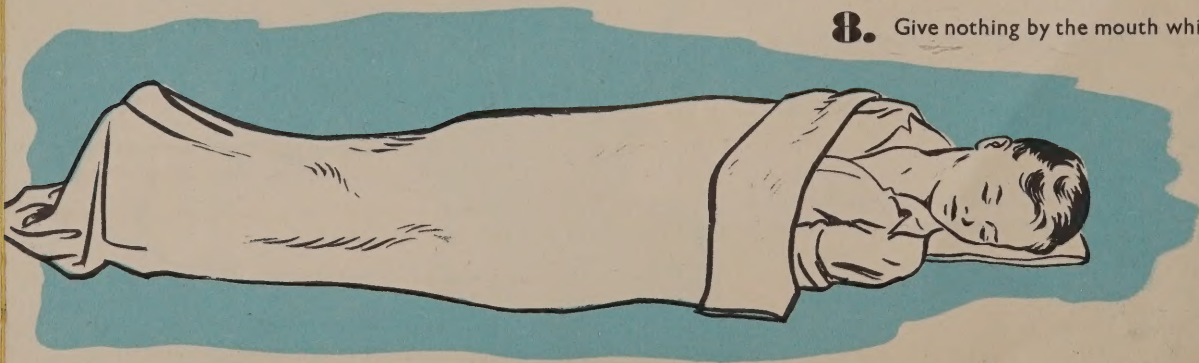
Chapter 13 Unconsciousness

Unconsciousness, or insensibility, is always due to the brain not working properly. This may be caused by:—

1. Shortage of blood supply to the brain; fainting, collapse and shock.
2. Lack of oxygen in the blood supply, as occurs when breathing is interfered with.
3. Injury to the brain.
4. Disease of the brain.

WHAT TO DO

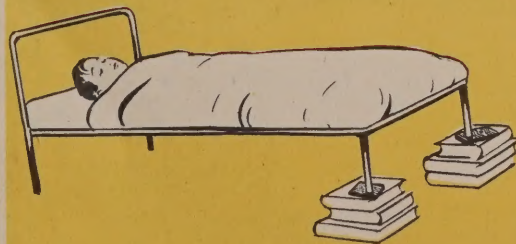
1. Send for a doctor at once.
2. If face is flushed—raise head and shoulders.
If face is pale, keep patient flat.
3. Stop all serious bleeding (except from ears).
4. Loosen clothing at neck, chest and waist.
5. Make breathing easy: head to one side, neck straight, chin forward, mouth clear of obstruction—remove froth, mucus or blood, and false teeth (if any).
6. Open windows and doors, if outside, keep crowd away.
7. Apply warmth—cover with rugs or coats, apply hot water bottles (well protected).
8. Give nothing by the mouth while patient is unconscious.



Shock is present in every case of injury or severe fright.

SIGNS and SYMPTOMS

1. Patient looks collapsed and face is pale. In severe cases he is unable to move.
2. Breathing feeble.
3. Pulse weak.
4. Patient feels cold, and sweat appears on forehead, nose and mouth.



WHAT TO DO

1. Lay patient down with head low.
2. Stop all bleeding.
3. Cover with blankets, rugs or coats. Apply hot water bottles (protected).
4. See that there is plenty of air but no draughts.
5. Loosen clothing.
6. Raise foot of stretcher, or bed, about 8 inches.
7. Give warm sweetened tea if patient is conscious.



It is a wise thing to give this treatment in any accident, so as to prevent shock occurring.

Remove patient from scene of accident, and sit or lay him down.

Keep warm and give hot sweetened drink.

Talk about other things to keep patient's mind away from accident.

FAINTING may be due to :

bad ventilation.
want of food, or overfeeding
sudden good or bad news.
severe bleeding.
bad sights or smells.

SIGNS and SYMPTOMS

Face becomes pale.
Patient feels giddy or sick.
Pulse is weak.
Breathing is fast.



WHAT TO DO

1. Loosen clothing at neck, chest and waist.
2. Either put head between knees or lay patient flat.
3. Give fresh air by fanning.
4. Hold smelling salts to nose (make sure not too strong).
5. When conscious, give cold water or warm sweetened tea.
6. If due to lack of food—give something light at first—biscuit or bread and butter.
7. Give rest—in shade, if out of doors.



INFANTILE CONVULSIONS or "FITS" in children may be due to:

undigested food.

teething.

fright or sudden noises.

SIGNS and SYMPTOMS

child becomes stiff, arches back and rolls up eyes showing only white of eyeball.

WHAT TO DO

1. send for doctor.
2. undress child, place in warm bath and apply cold sponge to head.
3. wrap in warm blankets and put to bed with hot water bottle (protected).



Chapter 14 Transport of Casualties

WALKING WITH SUPPORT

Patient only slightly injured and able to stand.



Don't try to practise these exercises with anyone heavier than yourself.

The FOUR-HANDED SEAT

to carry a patient able to use one or both arms.



1. Grasp left wrist with right hand.



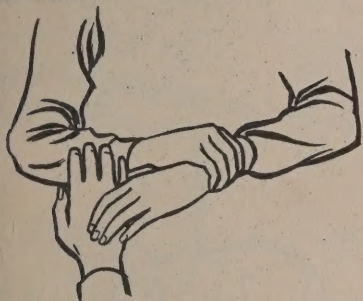
2. With each free hand grasp partner's wrist.



3. Tell patient to place arm round neck of each and sit on hand-seat.
4. Raise up gently and walk in step as shown

THREE-HANDED SEAT

to carry and support one leg of patient able to use one or both arms.



1. If patient has injured left leg, First Aider at left hand side keeps left hand free.
2. First Aider at right grasps left wrist with right hand.



3. Other First Aider grasps wrist to form seat as shown.
4. Stoop and tell patient to place an arm round neck of each and sit.



5. Gently raise patient and support injured leg. Walk in step as shown.

The TWO-HANDED SEAT

to carry helpless patient.



1. Stoop and face each other at each side of patient.
2. Pass arm round patient's back below shoulders and grip clothing.
3. Raise patient's back gently.

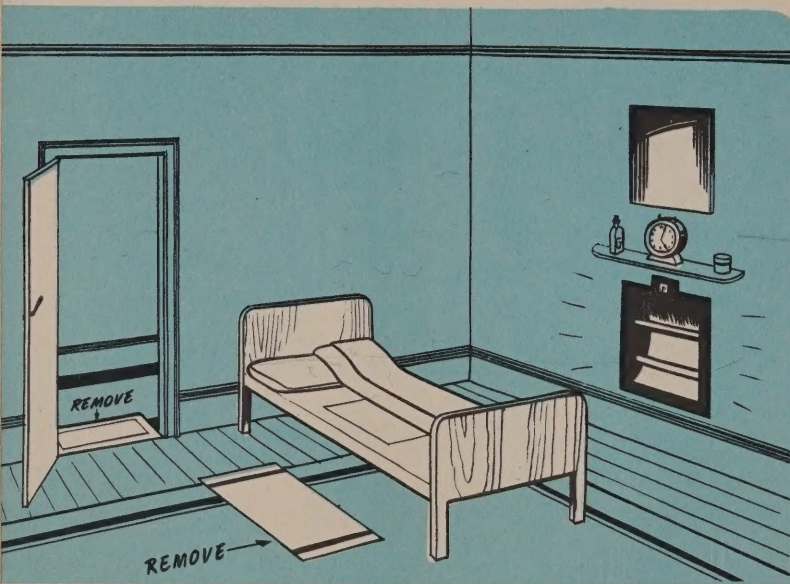


4. Pass other arm under patient's thighs and clasp hands in "hook grip" shown.

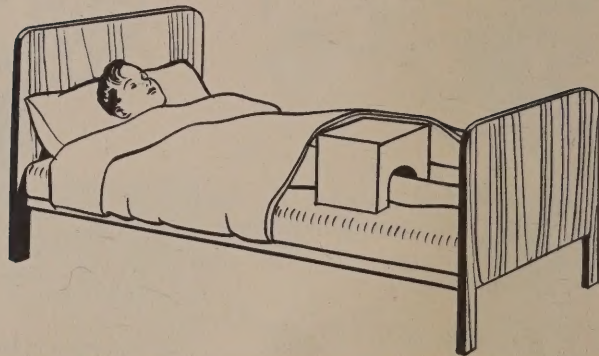


5. Gently raise patient and walk in step.

Chapter 15 Preparing for patient at home

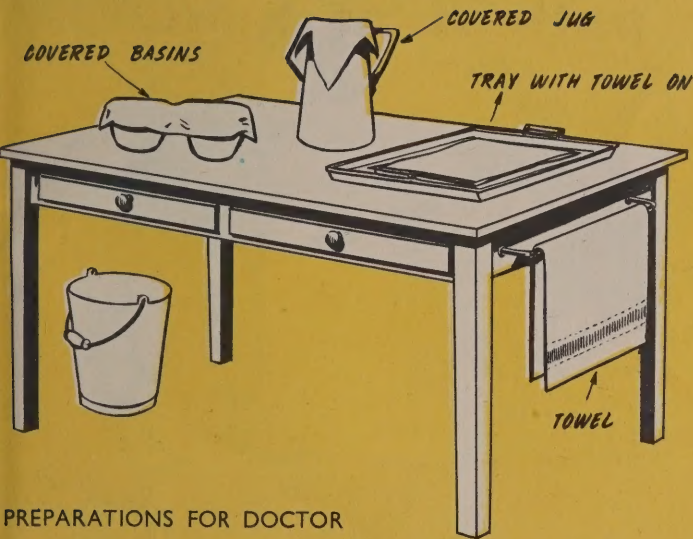


Choose a bright airy room—light fire in cold weather.
Use downstairs room, if convenient, but remove unnecessary furniture.
Remove mats and rugs from passages to avoid slipping.
Use narrow bed.
If fracture, place boards across framework under mattress to prevent sagging.
Place mackintosh sheet or drawsheet over undersheet.
Cover this with newspaper, brown paper or old sheet to prevent soiling of sheet while patient is using the bedpan or urine bottle.
Patient can be seated in a kitchen chair for carrying upstairs if necessary.



Blankets should be as light as possible.
Hot water bottles (covered) placed in bed for warmth.
Turn back bedclothes lengthwise when putting patient in bed and then cover and tuck in.
Arrange pillows for greatest comfort to patient.
Keep patient quiet while waiting for doctor.
Give hot milk or hot sweetened tea if patient is conscious.
Arm injury—support on cushion or pillow.

Leg injury—improvise cradle to keep weight of clothes off, for example on a cardboard hat box.
Lay patient flat if unconscious.



PREPARATIONS FOR DOCTOR

1. Boil plenty of water and allow to cool in kettles or covered pan.
2. Wash 1 or 2 enamel basins, rinse with boiling water and cover with clean towels.
3. Put out soap and clean towels for doctor.
4. Put out tray covered with clean towel for doctor's instruments and dressings.
5. Put out clean bucket for dirty dressings, which should be burnt later.
6. If doctor gives any instructions listen carefully and carry out thoroughly.

HOW TO ACT IN EMERGENCY...

1. Do only what you have been taught.
2. Be calm, quiet and cool-headed.
3. Be sympathetic, tactful and encouraging.
4. Bystanders will be willing to help, if asked in right way.
5. Write messages to doctor and be accurate.
6. Uncover patient as little as possible as chill increases shock.
7. Treat injury as far as possible.
8. Prepare for doctor's arrival.

EXERCISE I GRAZED KNEE

56



WHAT TO DO

1. Take patient indoors.
2. Give him something (toy or a book) to distract his attention.
3. Carefully remove the dirt by bathing the knee with warm water or warm salt solution (1 teaspoonful to a tumbler).
4. Apply a clean dry dressing, then cover with cotton wool and bandage.
5. If the skin around becomes inflamed and beads of pus gather in it, there is probably some pieces of gravel still in the wound. Take the patient to a doctor at once.
6. If the dressing sticks when re-dressing, bathe it off with warm water.



EXERCISE 2. SCALDED LEG

57



WHAT TO DO

1. Seat patient and support injured part.
2. Remove shoe and stocking gently—lift stocking away from leg as much as possible. *Do not touch the leg. Do not prick blisters.*
3. Soak strips of lint or linen in warm water and baking soda (2 teaspoonsful to a pint). Wring them out and apply to the scald as quickly as possible (they should overlap about $\frac{1}{2}$ inch).
4. Add layer of cotton wool, and bandage lightly.
5. Send for a doctor.
6. Seat patient comfortably and treat for SHOCK (see page 49).

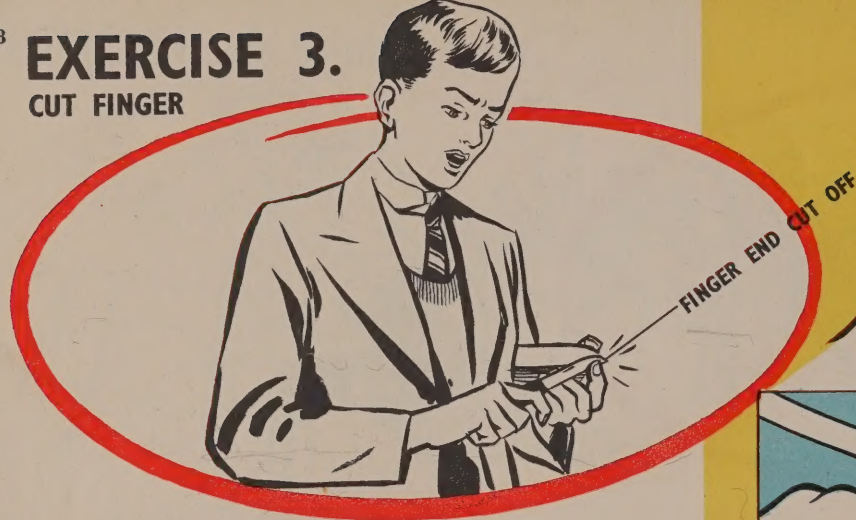


REMEMBER The important thing is to cover the scald to keep away the air, which increases the pain.



EXERCISE 3.

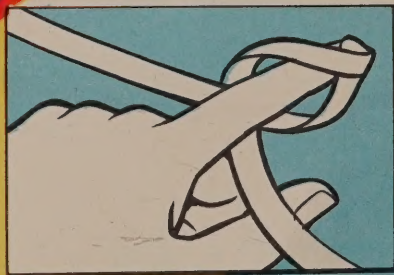
CUT FINGER



FINGER END CUT OFF

WHAT TO DO

1. If the piece of flesh is clean, put it back on the finger.
2. Tie a handkerchief, piece of string or tape round the base of the finger to stop bleeding.
3. Apply a clean dressing and bandage it to hold the cut flesh in place.
4. You must re-loosen the tape every 10 or 15 minutes, and REMOVE IT AS SOON AS BLEEDING STOPS.
5. Take patient to doctor at once.

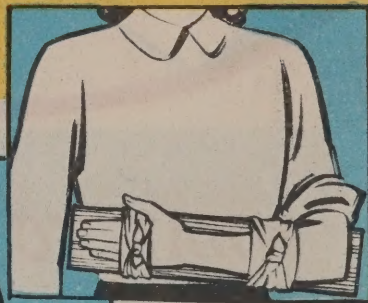




• WRIST PAINFUL
• CAN'T MOVE HAND
• SWELLING
• DEFORMITY

WHAT TO DO

1. Seat patient and reassure her.
2. Gently bend the elbow to a right angle.
3. Apply a well-padded splint from fingers to elbow.
4. Tie with two bandages (NOT over fracture).
5. Feel pulse and test finger nails for normal colour change.
6. Place arm in large arm sling (see page 8).
7. Treat for shock.
8. Send patient to doctor.



EXERCISE 5. FRACTURED COLLAR BONE



WHAT TO DO

1. Support the injured arm by holding the elbow, until a sling is ready.
2. If there is a house nearby, ask your friend to enquire for some suitable bandaging and warm water.
3. Put a small pad in the armpit. Use bandages, scarves, or belts, as a sling to support injured arm.



EXERCISE 6.

If arm is in an awkward position it may be a dislocated shoulder.



DISLOCATED SHOULDER

WHAT TO DO

1. Do not try to put the bone back in place.
2. Support the arm in the most comfortable position, with a large arm sling. Move the arm as little as possible.
3. Take patient to a doctor.

CUT EYEBROW

WHAT TO DO

1. Apply a dry dressing, and bandage.
2. Help patient along to the nearest house and let her rest and have a warm drink.
3. Bathe the eyebrow with clean water (preferably warm after boiling).
4. Treat for shock.
5. Send to, or for, a doctor.



EXERCISE 7. APPARENTLY DROWNED, with cut on back of head.



WHAT TO DO

1. Keep crowd away.
2. Turn patient face downwards, head lower than body to allow water to run out.
3. Loosen clothing and clear mouth of weeds, etc.



FIRST HELPER

- 4a.** Start artificial respiration IMMEDIATELY, and continue for an hour or more, if necessary.
- 5a.** When patient shows signs of breathing normally, adjust your movements to his breathing.
- 6a.** Continue artificial respiration until patient breathes or doctor arrives.
- 7a.** Don't leave patient until skilled assistance arrives.

SECOND HELPER

- 4b.** Ask onlookers to fetch rugs and hot water bottles.
- 5b.** Send accurate written messages to doctor and for ambulance.
- 6b.** Apply finger pressure (digital) to occipital arteries (see page 27) to stop bleeding.
- 7b.** Apply dressing and tight bandage round head.
- 8b.** Assist 1st helper by rubbing patient's limbs from toes and fingers upwards on inside. Also keep his mouth clear.
- 9b.** Cover patient with rugs or coats.
- 10b.** Assist as required to get patient home or to hospital, but NEVER LET HIM STAND OR SIT UP.



EXERCISE 8.



WHAT TO DO

1. Send for doctor at once.
 2. Do not move patient, except to turn head gently to one side so that tongue does not fall back and block airways.
 3. Stop any severe bleeding.
 4. Loosen clothing round neck, chest and waist.
 5. Cover with coat or rugs to lessen shock.
 6. If he regains consciousness and asks for a drink, give water only in small quantities. **NEVER** give anything by the mouth if there is bleeding from the mouth or pain in the abdomen.
- Lower head if face is pale.
Raise head slightly if face is congested.



A cold compress—A piece of lint, linen, flannel, or large handkerchief folded several times to the size needed, soaked in cold water and wrung out until it does not drip. This is applied to the injured part and changed frequently to keep it cold and wet.

A hot compress—A piece of lint, linen, flannel, or large handkerchief folded several times to the size needed, soaked in hot water and wrung out until it does not drip. This is applied to the injured part and changed frequently to keep it hot.

Forceps—Blunt pointed instruments used for picking up small articles.

Sterile—free from germs.

An antiseptic—A chemical agent that hinders the growth and activity of germs, but does not destroy them.

Mucus—A sticky fluid secreted by the mucous membrane lining the mouth and air passages. When mixed with the air in the mouth it forms froth.

Normal saline solution—One level teaspoonful of clean salt to one pint of freshly-boiled water. Use when cool. Keep the water covered while cooling.

Sodium bicarbonate solution—Two level teaspoonsful of powder to one pint of warm freshly-boiled water that has been allowed to cool. Keep the water covered while cooling.

Mild antiseptic solution—Any MILD antiseptic, used as directed on the bottle. Be sure and dilute with freshly-boiled water that has been allowed to cool. Keep the water covered while cooling.

SYLLABUS OF LECTURES

JUNIOR FIRST AID—PART I

Lecture 1. What is meant by First Aid. General principles.

Practical. To make patient comfortable with emergency equipment. Triangular bandages. Reef knot.

Lecture 2. Systems and structure of the body. Skeleton (omitting details of skull, spine, pelvis, feet and hands).

Practical. Slings. Large arm and small arm, open bandage used as a fan.

Lecture 3. Joints, muscles (omitting names). Injuries to muscles and joints (sprains, sprains, and dislocations).

Practical. Sprained ankle and wrist. Triangular bandages for heel, knee, and elbow.

Lecture 4. Circulatory system.

Practical. Location of pressure points.

Lecture 5. External bleeding (hæmorrhage). Nose bleeding.

Practical. To stop bleeding by digital pressure, pad and bandage, ring pad. Dressing and bandage for cut in the palm of the hand.

Lecture 6. General treatment of wounds. Dressings.

Practical. Treatment of cuts, grazes, bruises, stings of insects, blisters and splinters. Roller bandage for fingers (see Nursing Manual). Triangular bandage to keep dressings on hand and foot.

Lecture 7. Burns and scalds. Dressings.

Practical. Dressings for burns and scalds. Roller bandage for arm and leg (see Home Nursing Manual). Triangular bandage to keep dressings on scalp and shoulder.

Lecture 8. Revision of Part I. —Writing messages to doctor. Revision of pressure points.

JUNIOR FIRST AID—PART II

Lecture 1. Revision of Part I.

Practical. Triangular bandaging revision, including those to keep dressing on chest and back, hip and groin.

Lecture 2. Outline of respiratory system. Asphyxia by smothering, choking, and noxious gases. Accidents due to electricity.

Practical. Artificial respiration (Schafer's method). Friction of limbs. Covering and turning patient.

Lecture 3. Simple fractures. Their signs and symptoms. First aid to simple fractures only.

Practical. Simple fractures: humerus, radius, ulna, and wrist.

Lecture 4. Unconsciousness: General treatment only. Foreign bodies in eye, nose and ear. Poisonous berries.

Practical. Fractured ribs, crushed hand and injury to elbow.

Lecture 5. Shock: Signs, symptoms and treatment. Fainting and infantile convulsions.

Practical. Hand seats for injuries to the lower limb.

Lecture 6. Preparation of room for reception of case of accident or illness. To prepare for arrival of doctor.

Practical. Making bed, filling hot water bottle, etc. Barrel bandage for injury to jaw.

Lecture 7. How to act in emergency.

Practical. Sending accurate messages to doctor. Revision of injuries to the upper limb, and fractured clavicle.

Lecture 8. Revision and tests on Parts I and II.

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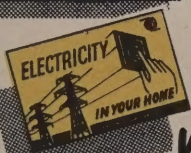
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